

# **Executive Director's Report to the Colorado River Board of California**

**June 13, 2018**

## **ADMINISTRATION**

### **Minutes of the April 11, 2018 Meeting of the Colorado River Board**

A draft of the minutes from the April 11, 2018 Board meeting held in Ontario, California, has been prepared and is included in the Board folder for review and proposed adoption during the Board meeting.

### **Proposed Fiscal Year-2018/2019 Budget for the Colorado River Board of California**

The proposed Fiscal Year-2018/2019 budget for the Colorado River Board of California is attached for review and consideration. The proposed budget includes the following:

- Governor's Budget for the Colorado River Board of California is \$2,222,000, compared to \$2,149,000 for FY-2017/2018.

The final FY-2018/2019 budget for the Board will be presented for Board approval and adoption at its June 13<sup>th</sup> regularly scheduled meeting.

## **COLORADO RIVER BASIN WATER REPORT**

As of June 4<sup>th</sup>, the water level at Lake Powell was 3,611.92 feet with 12.93 million acre-feet (MAF) of storage, or 53% of capacity. The water level at Lake Mead was 1,079.89 feet with 10.00 MAF of storage, or 38% of capacity. As of June 3<sup>rd</sup>, the total system storage was 30.64 MAF, or 51% of capacity, which is 1.23 MAF less than the system storage at this time last year.

As of June 4<sup>th</sup>, the Upper Colorado River basin reservoirs, excluding Lake Powell, ranged from 82% of capacity at Fontenelle Reservoir in Wyoming, 89% of capacity at Flaming Gorge Reservoirs in Wyoming and Utah; 96% of capacity at Morrow Point and 62% of capacity at Blue Mesa Reservoirs in Colorado; and 72% of capacity at Navajo Reservoir in New Mexico.

As of June 4<sup>th</sup>, the June 2018 observed inflow and May 2018 inflow forecast into Lake Powell are 0.960 MAF (36% of normal) and 1.21 MAF (52% of normal), respectively. The forecasted April to July 2018 runoff into Lake Powell is 2.8 MAF (39% of normal). The forecasted inflow into Lake Powell for Water Year-2018 is 5.27 MAF (49% of normal).

## 2019 Colorado River Annual Operating Plan, 1st Consultation

On May 30, 2018, Reclamation released the first draft of the 2019 Annual Operating Plan (AOP) and held a stakeholder webinar to provide an overview of the draft AOP and to accept comments from stakeholders. The 1968 Colorado River Basin Project Act requires that the Secretary prepare a report documenting the actual operation for the previous water year and the projected operations for the upcoming water year. Based on the criteria established within the 2007 Interim Guidelines, the August 24-Month Study sets the operational tiers at Lakes Powell and Mead for the upcoming year.

Based on the May 2018 24-Month Study Report and the most probable inflow scenario, the projected operational tier for Water Year-2019 continues to be the Upper Elevation Balancing Tier with a most probable release of 9.0 MAF from Glen Canyon Dam. However, it is the August 2018 24-Month Study Report that will determine and fix the official operating tiers for Lakes Powell and Mead and these determinations will be updated and documented in the final version of the 2019 AOP. The second 2019 AOP consultation is scheduled to be held on July 25, 2018, in Las Vegas, Nevada, and will also be available by webinar.

## Final 2017 Colorado River Accounting and Water Use Report

On May 15, 2018, the U.S. Bureau of Reclamation (Reclamation) released the final “Calendar Year 2017 Colorado River Accounting and Water Use Report for Arizona, California, and Nevada,” in accordance with Article V of the Consolidated Decree in *Arizona v. California*. The Decree requires documentation of releases of water through regulatory structures controlled by the United States, diversions, consumptive uses, and return flows to the mainstream that would be available for delivery to downstream users in the U.S., or to satisfy water deliveries to Mexico pursuant to the 1944 Water Treaty with Mexico. In response to stakeholder comments, one new feature on this year’s report include a series of maps showing the general locations of the water users in the Lower Basin. The final report can be accessed and viewed online at: <https://www.usbr.gov/lc/region/g4000/4200Rpts/DecreeRpt/2017/2017.pdf>.

In Calendar Year 2017, the total consumptive use of each lower basin state was significantly less than its respective basic apportionment: Arizona (2,509,503 AF), California (4,026,515 AF), and Nevada at 243,425 AF. The total lower basin consumptive use represents one of the lowest in decades. Arizona contributed 98,692 AF to various system conservation programs, while Nevada left 56,575 AF of unused apportionment in Lake Mead. The Metropolitan Water District of Southern California (MWD) created 315,649 AF of Intentionally Created Surplus (ICS) water, and the Imperial Irrigation District (IID) created 21,983 AF of ICS and 35,399 AF of excess conservation. Through the Pilot System Conservation Program, the City of Needles and Coachella Valley Water District created 298 AF of water that was left in Lake Mead to benefit system storage. The total Lower Colorado Water Supply Project (LCWSP) water pumped in Calendar-Year 2017 was 7,377 AF, with the total federal contractors’ consumptive use at 234 AF and total non-federal contractors’ consumptive use at 7,143 AF. Excess flows to Mexico in 2017 totaled 16,688 AF, and 126,701 AF of drainage water was bypassed to the Cienega de Santa Clara in Mexico via the Main Outlet Drain Extension Canal (Bypass Canal) pursuant to Minute 242 salinity management

requirements.

### Improving Sub-Seasonal to Seasonal Precipitation Forecasting Workshop

The Western States Water Council and California Department of Water Resources cosponsored a workshop in San Diego on May 14-16, focused on improving sub-seasonal to seasonal forecasting to support water management decision-making. Sub-seasonal to seasonal forecasting aims to predict weather and precipitation conditions 2 weeks to 2 years into the future. Improving this forecast is challenging, as it relies on the interaction of various global atmospheric patterns with local conditions such as topography. The workshop devoted considerable time to atmospheric rivers, which are responsible for many of California's largest winter storms. Scientific research on the effect of atmospheric rivers on the interior west, including the Colorado River Basin, is still fairly limited.

Representatives of the Colorado River Basin States recently formed the Colorado River Climate and Hydrology Working Group, which has been working to determine where future research should be focused to improve hydrologic modeling and forecasting in the Colorado River Basin. The group is moving forward with commissioning a State of the Science Report to evaluate these on-going science and research needs.

## **COLORADO RIVER BASIN PROGRAM REPORTS**

### Status of the Lower Basin Drought Contingency Planning Process

In an effort to jump-start the drought contingency planning (DCP) processes in both the Upper and Lower basins, the Basin States principals and Reclamation Commissioner Brenda Burman and her senior staff are scheduled to hold a focused meeting on June 19<sup>th</sup> in Santa Fe, New Mexico. Additionally, in advance of the full Basin States meeting, the Lower Basin principals are scheduled to hold a working meeting on the afternoon of June 18<sup>th</sup>. The intended goal of the Basin States meeting is to identify the remaining tasks to be accomplished and schedule and timeline for completion of both the upper and lower basin DCPs.

### Status of Minute No. 323 Implementation

On May 14<sup>th</sup>, U.S. International Boundary and Water Commission (IBWC) U.S. Section Commissioner, Edward Drusina was asked by the Administration to resign. Commissioner Drusina was appointed by President Obama in 2010 and led the U.S. Section through the binational negotiations and implementation of Minutes 316, 317, 318, 319 and 323. Current USIBWC Principal Engineer Jose Nunez has been named by the Administration as the Acting Commissioner of the U.S. Section.

### Status of the Colorado River Salinity Control Program

The Salinity Control Forum, Advisory Council and Work Group met in St. George, Utah,

on May 14-17. Forum members heard status updates on the Paradox Valley Unit (PVU) operations and preparation of the draft Environmental Impact Statement (EIS), draft schedule for the 2020 Triennial Review, Salinity Economic Impact Modeling contracting, Bureau of Land Management framework document, Scientific Investigation Reports, and the Pah Tempe Springs concept document.

Despite approaching the end of its estimated useful life, the PVU injection well continues to be operating adequately and Reclamation estimated that approximately 94,000 tons in 2016 and about 188,000 tons in 2017, have been disposed of by deep-well injection into the adjacent Leadville geologic formation. This translates to almost 10% of the total annual salt control in the Colorado River Basin, making the PVU one of the more effective salinity control projects in the Basin. Reclamation continues to monitor the injection pressures and volumes and make operational changes as needed to evaluate and monitor potential impacts on the frequency and magnitude of seismic events.

Reclamation continues to work on the development of the PVU EIS alternatives, which include a second injection well, evaporation ponds, and the use of Zero Liquid Discharge (ZLD) technology. For the second injection well alternative, Reclamation is in the process of preparing a 30%-level design in order to get cost estimates for potential well locations under consideration. For the ZLD alternative, Reclamation recently awarded demonstration project contracts to two firms, Saltworks Technologies, Inc. (STI) and Solid Waste Training Institute (SWTI). In March, STI completed 30-day field demonstration tests for treatment of the PVU brine and is in the process of evaluating the results. A report is being prepared that will evaluate the technical and economic feasibility of the ZLD technology. Meanwhile, due to delays in manufacturing of equipment (for example, solar troughs used to superheat the brine) needed for field testing, SWTI is not expected to begin its demonstration project until June/July. A table comparing various design and construction features of the PVU EIS alternatives including the advantages and disadvantages is shown below.

PVU Alternatives				
	BIF Injection Well	MM1 Injection Well	Evaporation Ponds	ZLD
Capital Cost	Medium	Medium	High	Low
O&M Cost	Medium	Medium	Low	High
Salinity Control (gpm / tons/year)	200 / 113,000	200 / 113,000	300 / 170,000	300 / 170,000
Area of disturbance (acres)	~15	~65	~575	~80
Overall Project Area (acres)	~440	~810	~1530	~480
Landfill	No	No	Yes	Yes
Weaknesses	Directional drilling, induced seismicity	Distance from STF, induced seismicity	Large footprint, wildlife and visual impacts	High energy consumption
Strengths	On USBR land	Simpler drilling	Low energy and O&M	Modular design/operation

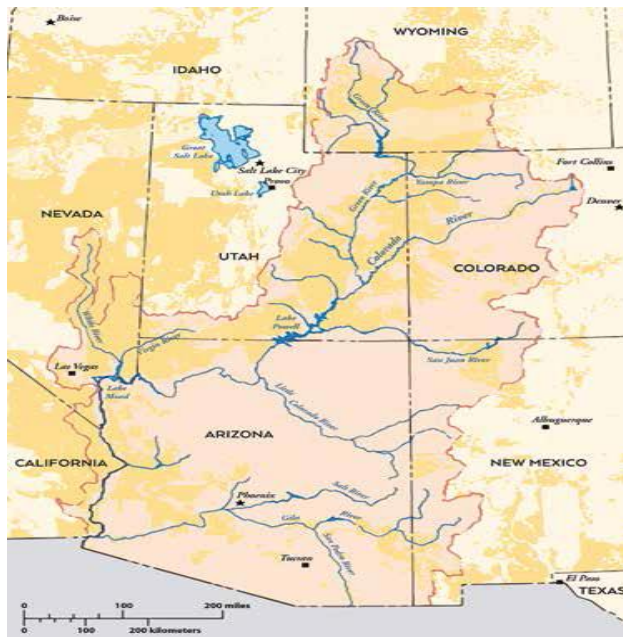
**Table 1:** Comparison of PVU EIS Alternatives.

In August 2017, the Department of Interior issued a Secretarial Order (No. 3355) establishing strict page number and time limit requirements for completion of EISs. Complex EISs must be no more than 300 pages and a Record of Decision (ROD) must be completed within one year after issuance of a Notice of Intent (NOI). An additional memorandum was issued in April 2018 requiring that for ongoing EISs such as the PVU alternatives study, the ROD must be completed by April 2019. It is unclear if Reclamation can meet this schedule because the ZLD alternative is still under development. Staff will provide an update if there are any potential impacts to the current PVU EIS schedule.

Although the 2017 Triennial Review was completed only a few months ago in October 2017, Work Group members are starting the process again to prepare for the 2020 Triennial Review. Work group members will meet this summer to discuss the Plan of Implementation and lay out milestones to have the next Review completed by end of 2020.

Reclamation reported that an Application Review Committee has recommended selection of a consultant to assist with updating the Salinity Economic Impact Model and awarding of the contract should occur soon. The term of the contract will be for two years. A modeling subcommittee kickoff meeting is expected to occur this summer. It is expected that the updated modeling work will be incorporated into the 2020 or 2023 Review.

The 1984 amendment to the Colorado River Basin Salinity Control Act authorized the Bureau of Land Management (BLM) to develop a program to minimize salt contributions to the Colorado River from lands administered by the BLM, which are approximately 53 million acres within the Colorado River Basin, representing almost one-third of the total area of the Basin. As part of this effort, the BLM recently issued the report “A Framework for Improving the Effectiveness of the Colorado River Basin Salinity Control Program, 2018-2023”. The BLM report identifies priority strategies and activities that the BLM will implement over the next 5 years to improve management and effectiveness of the Colorado River Basin Salinity Control Program. The report may be downloaded at: <https://www.blm.gov/download/file/fid/21722>. The cost of salinity control is expected to increase in the future as the more cost-effective projects are completed. Given the vast amount of BLM-administered lands within the Basin, future salinity control projects could focus on implementing best management practices and strategies on public lands to continue to reduce salt contributions to the Colorado River.



**Figure 1:** The BLM is responsible for administering about 53 million acres of public lands (shown as dark yellow) in the Colorado River Basin.

Reclamation reported that the Technical Advisory Group has made its recommendations to the Colorado River Basin Advisory Council regarding expenditures of cost-sharing dollars for studies, investigations, and research (SIRs). Five SIRs were selected for funding and the one of particular interest is the “Analysis of Long-term Landscape and Water Quality Changes in the Upper Colorado River Basin” study. The study will evaluate the underlying causes of long-term trends in salinity levels in the Upper Colorado River Basin. The work will be performed by the U.S. Geological Survey (USGS) over a three-year period.

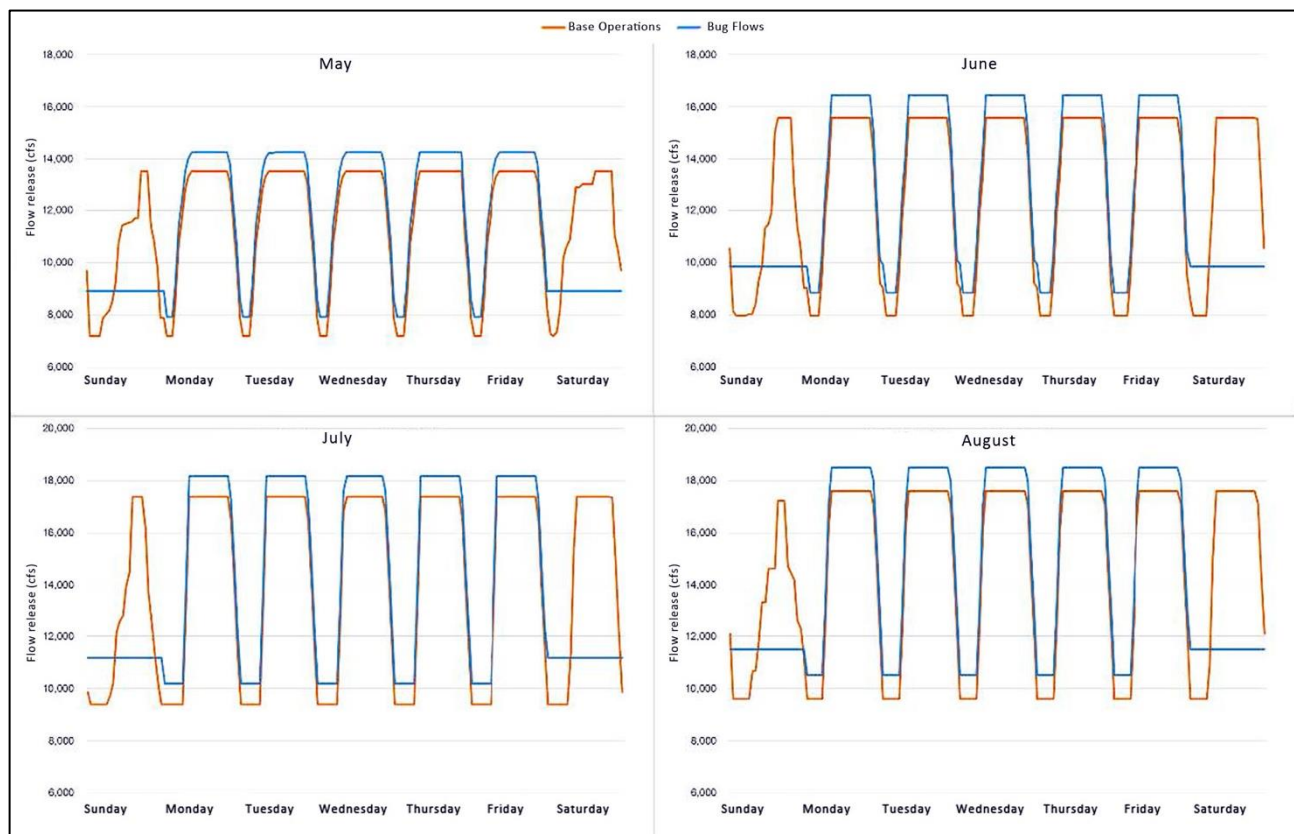
Finally, the next Work Group meeting will be on July 19-20 in Salt Lake City, Utah. The



Work Group will work on a number of tasks, including development of a concept paper on a potential Pah Tempe Springs salinity control project.

### Status of the Glen Canyon Dam Adaptive Management Program

At the recommendation of the Glen Canyon Dam Adaptive Management Program, the Department of the Interior has initiated experimental “Macroinvertebrate Production Flows,” also known as bug flows, at Glen Canyon Dam, that began on May 1<sup>st</sup> and will run through August 31<sup>st</sup>, 2018. Bug flows were included in the 2016 Long-Term Experimental and Management Plan (LTEMP) EIS and are the first experimental flow conducted under this plan. Bug flows consist of steady weekend releases from Glen Canyon Dam, intended to provide favorable conditions for aquatic insects and increase the food base supporting ecosystems in Glen and Grand canyons. The flows will not change the overall weekly, monthly, or annual release volumes from Glen Canyon Dam.



**Figure 2:** Weekly “bug flow” release patterns for May, June, July, and August are shown in blue, compared to regular Glen Canyon Dam releases, shown in orange. To compensate for low, steady weekend releases, dam releases during the week are shifted upward. Weekly, monthly, and annual release volumes are not affected by the flows.

The Adaptive Management Work Group (AMWG) met via webinar on May 22<sup>nd</sup>. The

group heard a presentation from the U.S. Fish and Wildlife Service (USFWS), which recently announced its intention to propose down-listing the humpback chub from endangered to threatened. The species currently has five populations: four in the Upper Basin and one in the Lower Basin, downstream of Glen Canyon Dam. The Lower Basin population is by far the largest and has increased in recent years to a fairly stable population of more than 10,000 individuals. The four Upper Basin populations are small but are believed to be stable or trending slightly downward. A proposed classification rule and revised recovery plan will be developed in the coming year. The AMWG also received an update on the ongoing translocation of humpback chub into tributaries of the Grand Canyon in an attempt to add redundancy to the population, most of which is centered around one tributary, the Little Colorado River.

Finally, the Technical Work Group (TWG) will meet June 25-26 in Phoenix, Arizona.

#### Status of the Lower Colorado River Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) Work Group met May 9-10 in San Diego, California to discuss the FY-2019 work plan and budget and the FY-2017 accomplishment report. Conservation area development is moving forward quickly, with approximately 5,700 acres of habitat established through FY-2017. Construction at one of the program's newest conservation areas, the Mohave Valley Backwater, is in its final stages, after which construction will begin at the Planet Ranch Conservation Area along the Bill Williams River. Agreements are also in place to more than double the size of two existing conservation areas: Beal Lake, near Topock Marsh, and Cibola National Wildlife Refuge Unit #1. In addition, a number of new conservation areas are under consideration in California, which must host a proportion of the LCR MSCP's created habitat due to CESA requirements: Parker Dam Camp near Parker Dam; Palo Verde Ecological Reserve South, Dennis Underwood Conservation Area, and Three Fingers Lake Conservation Area, all in the Palo Verde Valley; and Yuma Meadows Conservation Area, located near Imperial Dam. The Program is close to having determined the location of all required acreage, although construction of these habitat areas is expected to take more than a decade.

Monitoring and research for the LCR MSCP covered species continued in FY-2017 and FY-2018. Yellow-billed cuckoos continue to be detected frequently at the program's conservation areas, including at newly constructed sites such as the Laguna Division Conservation Area. However, the endangered southwestern willow flycatcher is still elusive, with no detections of the species at LCR MSCP conservation areas in FY-2017. Long-term survival of stocked native fish still appears to be low, with recontacts of fish, particularly bonytail, dropping off quickly post-stocking. Razorback suckers are often captured more than a year post-stocking, however, and are maintaining genetic diversity in Lake Mohave, the largest population of the species. Sonic tagging of native fish is providing more detailed information about post-stocking movement and habitat preferences.

The LCR MSCP Steering Committee will meet via teleconference on June 27<sup>th</sup>.



## **GENERAL ANNOUNCEMENTS AND UDATES**

### Appropriations Update

Last month, the House and Senate completed their respective subcommittee mark ups of the Fiscal Year 2019 Energy and Water Appropriations bill. The House Energy and Water Appropriations bill also passed out of the full House Appropriations Committee and is now awaiting floor consideration. The Senate Energy and Water Appropriations subcommittee approved a \$43.77 billion bill providing \$1.49 billion to the Bureau of Reclamation and more than \$6.93 billion to the U.S. Army Corps of Engineers. The House Energy and Water Appropriations bill provides \$44.7 billion including \$1.56 billion for the Bureau of Reclamation and \$7.28 billion for the U.S. Army Corps of Engineers. The House is expected to pass the Energy and Water Appropriations bill soon as part of a “mini-bus” appropriations package. It is expected that the Senate will move on its Energy and Water appropriations bill sometime this month.

The Senate Report for Energy and Water includes the following language, which is helpful in mitigating ongoing Colorado River drought impacts: “Of the funds recommended under the heading “Water Conservation and Delivery”, \$30,000,000 is allocated to fund Colorado River water conservation, including the Lower Colorado River Operations Program and the Upper Colorado River Operations Program.” Both the House and Senate E&W reports included \$6 million for Reclamation’s Colorado River Basin Salinity Control Program.

### Committee and other Government Activities

#### **Water Resources Development Authorization**

In May, both the House and Senate began consideration of water resources development authorization (WRDA) legislation. The House passed the WRDA legislation in early June by a vote of 408-2. By design it did not contain any Bureau of Reclamation provisions.

The Senate Environment and Public Works Committee also passed its bill (S.2800) that is also awaiting full Senate consideration. This bill includes provisions which would require the U.S. Army Corps of Engineers’ Headquarters and each respective District office to provide Congress with four-year work plans and budgets on an annual basis and would establish an appeals board for water storage projects. This bill also prioritized certain water storage projects in the West.

#### **USDA Farm Bill**

Earlier this month, the House Farm bill (H.R. 2) failed under full chamber consideration. Moderate House Republicans and Democrats voted against the bill to pressure House leadership to put forward legislation addressing ongoing immigration issues related to the Deferred Action for Childhood Arrivals program. It is expected that the House will reconsider its Farm bill in late June, maybe even by June 22<sup>nd</sup>.

The Senate Agriculture Committee is expected to begin marking up its version of the Farm bill on or about June 13<sup>th</sup>. That process is expected to last up to five weeks. A draft of the Senate

Farm bill is expected to be released soon. In an ideal scenario both chambers will be ready to conference the bills by mid-July, but the process could drag out into the fall. The 2014 Farm bill and current authorizations expire on September 30<sup>th</sup>.

### **Update on Senate August Recess**

Senate Majority Leader Mitch McConnell (R-Ky.) announced this week he was canceling much of the chamber's typical August recess in large part to allow time to have spending bills completed when the new fiscal year begins on October 1<sup>st</sup>.

### **Status of Department of the Interior Reorganization**

On June 6<sup>th</sup>, staff attended a short “listening session” in Boulder City, Nevada, with acting Assistant Secretary for Wildlife and Parks, Ms. Susan Combs, regarding the Department of the Interior’s proposed reorganization efforts. Ms. Combs reported that the Department is considering the creation of thirteen regions and would bring together the management authorities and responsibilities of the Department’s various bureaus more effectively and efficiently, including administrative activities related to contracting, procurement, human resources, and information technology. The four upper division states of Colorado, Utah, New Mexico and Wyoming would comprise the new Region 8, and southern California, Arizona and the southern portion of Nevada would make up the proposed new Region 9. The Department is proposing to create the new position of Interior Regional Directors, at the Senior Executive Service level, to manage each of the thirteen regions. Maps of the current bureau regions and the new proposed reorganization have been included in the Board folder.